

# ECONOMIC INTEGRATION IN THE INDIAN SUB-CONTINENT

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## *Introduction*

Economic co-operation ranging from full integration to preferential trading arrangements on a regional or sub-regional basis among the less developed countries has received attention for quite some time from national governments, international agencies, as well as professional economists.<sup>1</sup> Outstanding successes achieved in spheres of income, employment and productivity in the Western European countries as a result of the Common Market arrangements have impressed the policy makers in the less developed countries and induced them to think in terms of similar regional co-operation.

Some economists<sup>2</sup> have attempted to modify the neo-classical framework of trade theory on the ground that conventional tools for achieving internal and external equilibrium cannot work satis-

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\* The author wishes to express his debt of gratitude to his employer, the Government of Gujarat for the grant of leave, the United States Educational Foundation in India and the International Institute of Education for the Fulbright Travel Grant and to the East West Center for the grant of research internship. The views expressed in this paper do not represent the views of the organizations referred to above.

The author is deeply grateful to Professors Moheb Ghali, Youngil Lim, John H. Power, Seigi Naya, and Yeong Her Yeh, all of the University of Hawaii, for their critical comments on an initial draft of this paper and any errors that remain are the author's own responsibility.

<sup>1</sup> For details on economic co-operation in Asia in particular see Youngil Lim, "ECAFE's Trade Expansion proposal for Asia: An Appraisal," *Journal of Common Market Studies*, Vol. XI, No. 2, December 1972, pp. 103-119.

<sup>2</sup> Outstanding among them are Cooper, C. A., and Massell, B. F., "Toward a General Theory of Customs Union for Developing Countries", *Journal of political Economy*, Vol. 73, October 1964, pp. 461-76; Kitamura, H., "Economic Theory and Regional Economic Integration of Asia" in *Latin American Economic Integration*, ed. Wionczek, N. C. London and New York: Praeger, 1966. Linder, S. B., *Trade and Trade policy for Development*, New York: Praeger, 1967; and Mikesell R. F., "The Theory of Common Markets as Applied to Regional Arrangements Among Developing Countries." in *International Trade Theory in Developing World*, (ed.) Harrod, R. F., and Hagne, D. C. London: Macmillan, 1963.

factorily in the less developed countries since the condition that guarantee success are not obtained. The trade relationships between the advanced and the less developed nations are not on an equal footing since the developmental input imports for the less developed countries far exceed their current export earnings. There has been a substantial volume of trade among the advanced nations themselves, whereas the imports from the less developed countries into the advanced countries have been mostly consisting of either primary goods or processed primary goods, the demand for which is relatively income inelastic or price inelastic, or both. Persistent balance of payments disequilibria have to be met with *ad hoc* import restrictions, first in regard to non-essentials and later on domestically substitutable essentials. Thus an era of import substitution which was started in the sixties became respectable from the point of view of industrialization in the less developed countries. But the accompanying effects have proved to be harmful; indiscriminate import substitution has resulted in misallocation of resources; the domestic currencies overvalued as a result of import restrictions have actually favoured imports rather than development of exports, and the net protection has been much less than the nominal protection. Further, the import substitution has been of capital intensive nature since the essential capital equipment imports were made cheaper by the overvalued domestic currencies, and as well as by the preferential import policies. These have accentuated the problem of unemployment as well. The narrow domestic markets have also been responsible for more expensive import substitution since economies of scale are not realizable in such instances.<sup>3</sup>

The "modified" trade theory would then suggest restricted trade by the less developed countries with the advanced countries, and free trade among the less developed countries themselves. The restricted trade with the developed countries is necessary to bridge the foreign exchange gap and the imports would be entirely of essential capital goods. Restrictions on trade do not mean reduction of trade in the long run since there would be a growing import volume of capital goods and hence trade with developed nations would not decrease. As regards free trade among the less devo-

<sup>2</sup> For a detailed discussion of protection and its effects, see Power, J. H., "The Role of protection in Industrialization Policy with Particular Reference to Kenya," *Eastern Economic Review*, Vol. 4, No. 1, June 1972, pp. 1-20.

developed countries, the conditions for a successful operation of the neo-classical trade theory are easily fulfilled. The less developed countries are at more or less similar levels of economic development and, therefore, trade relations could take place on equal footing. The conventional tools for achieving internal and external equilibrium could also be used without any detriment to national growth. Free trade would result in optimum allocation of resources within the region in accordance with the principle of comparative advantage; there would be a reallocation of resources in the region in the area of import substitution. The already existing import substitution industries could operate more efficiently due to economies of scale gained from the enlargement of the market. Thus, an expensive individual import substitution could be replaced by a more efficient regionalized import substitution. The reallocation of resources in the area of import substitution on a regional basis would result in substantial gains. Initially, formation of a regional trading arrangement in the form of a customs union might result in net welfare loss in the sense of trade diversion losses being greater than trade creation gains, but the long term gains of dynamic nature are expected to be considerable. Reallocation of resources, increased investment and growth of industries in the region under a relatively competitive circumstance of free trade are expected to be part of the dynamic gains. Hence, initial trade diversion is nothing but diversion of developmental forces away from the advanced countries and toward the less developed countries themselves.<sup>4</sup>

A detailed *ex-ante* study of effects of a regional integration will have to take into consideration both static and dynamic effects. Though static effects are quantifiable, the methodology in regard to quantification of dynamic effects is uncertain.<sup>5</sup> A quick and rough way of ascertaining the effects of integration is to calculate the integration index. This was employed in two separate studies conducted in recent years, one with respect to certain select countries in Latin America by Professor Jorge Sakamoto and another with res-

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<sup>4</sup> Linder, S. B., *Op. cit.*, pp 125-139.

<sup>5</sup> Jayaraman, T. K., *Static Effects of a Hypothetical Customs Union in the Indian Sub-continent*, unpublished dissertation submitted to University of Hawaii Honolulu, Hawaii, December 1975.



pect to certain countries in Africa by Professor Ardy Stoutjesdijk.<sup>6</sup>

The purpose of this paper is to calculate the integration index for the countries in the Indian sub-continent, namely India, Pakistan, Bangladesh, Nepal and Ceylon, and assess whether there exists a case for economic integration among them. The countries chosen offer an ideal setting for sub-regional co-operation since they have a common cultural background. It is far easier to initiate a proposal for discussion among any set of countries for a free trade area, customs union, or complete economic integration if there has been a commonality in the areas of tastes, measurements of units and standards, and general cultural and linguistic characteristics.<sup>7</sup> However, more than anything else, a favourable political atmosphere in the region is necessary for a successful initiation of any regional co-operation measures. The present situation appears to be far from it. But this should not discourage consideration of co-operation in the areas of trade and development. In fact, it is the contention of the author that an awareness of economic benefits from such co-operation would pave the way for fostering favourable climate in the area. Further, the Indian sub-continent before 1947 was indeed part of a customs union, and the subsequent vigorous trade between India and Pakistan until 1965 showed that despite the partition of the British India into two sovereign nations, economic co-operation would still be beneficial. After the emergence of Bangladesh, a sense of realism has entered into the relations between the countries in the region and trade relations, which were disrupted in 1965 between India and Pakistan, have been resumed. Thus, the prospects of economic relations appear to be brighter. Therefore, discussions of long-term arrangements such as integration would not be really out of place.

### *Methodology*

There are certain basic assumptions behind the methodology

<sup>6</sup> Sakamoto, Jorge, "Industrial Development and Integration of the Underdeveloped Countries," *Journal of Common Market Studies*, Vol. 7, No. 3, 1969 pp. 283-304; and Stoutjesdijk, Ardy, *Normal patterns of Industrialization in East Africa* (mimeo), Kampala: Makerere Institute of Social Research, 1970.

<sup>7</sup> Krauss, M. B., "Recent Developments in Customs Union Theory: An Interpretive Survey," *Journal of Economic Literature*, Vol. 10, No. 2, June 1972, pp. 413-36.

for calculating the integration index. First, it is assumed that economic development of a country depends on its industrial base. The most potent dynamic factor in the process of accelerated economic growth is industrial growth, because industrial activity is itself a dynamic one. The earnings of a worker in industry are greater than the earnings of a labourer in agriculture; industry has also a dynamic impact on agriculture; and on the entire social and institutional framework through its demands for skills and changes in the pattern of consumption and general patterns of living. Secondly, as economic development proceeds, changes in the industrial sector could be observed as regards the sequence of emergence of certain industrial branches and their size. At a relatively low level of development marked by lack of capital, entrepreneurship and technical skills, by low per capita income, scarcity of infrastructure, lack of markets for industrial goods and lack of transportation network, the prevalent industries produce simple consumer goods, have a low capital/output ratio and are easy to operate economically at low levels of output; e. g., food processing and textile industries. As the pace of development accelerates, the industrial sector gets more diversified with the emergence of new branches such as light chemicals, leather, pulp and paper, etc.

The third assumption is that the level and composition of manufacturing industry in a given country could be related in a quantitative way to a certain number of economic characteristics of that country. A study on "Patterns of Industrial Growth" by Hollis B. Chenery<sup>8</sup> attempted to express the quantitative relations in terms of a set of linear regression equations in which the levels of total manufacturing output and of outputs in each of the thirteen sectors according to ISIC 2-digit classification with some combination of sectors—both expressed in terms of value added (gross value at market prices of output minus cost of materials and power used)—are explained in terms of a few selected macroeconomic variables. Professor Chenery's method was utilized by the United Nations in their detailed study and the results of a cross section analysis based on a combined sample of 42 countries in 1953, and 58 countries in 1958, have been made available.<sup>9</sup>

<sup>8</sup> Chenery, H. B., "Patterns of Industrial Growth," *American Economic Review*, Vol. 50, September 1960, pp. 624-54.

<sup>9</sup> United Nations, *A Study on Industrial Growth*, New York: U. N. Publishing Service, 1963.

Eight candidate variables were considered for running the multiple regression analysis: per capita income, population, rate of economic development, government policy expressed in terms of quantitative variables such as percentage share of government expenditure on current account in GDP, natural resources, trading position, technological factors such as horsepower capacity, installed power per worker and other factors such as availability of technical skills. Following statistical tests, only two candidates, per capita income (Y) and population (P) were retained.

Per capita income is one of the most important factors for the level and composition of manufacturing output both in closed and open economies. On the demand side, per capita income has a significant influence on patterns of production. As per capita income grows, the proportion of personal income spent on food declines and that spent on consumer durables and other commodities of higher income elasticities increases. This has a corresponding effect on patterns of industrial production. Similarly, the distribution of total demand among investment, government consumption and private consumption also tends to vary with the level of per capita income. On the supply side, there is a correlation between per capita income and the relative costs of labour and capital and also with availability of skills and technical knowledge. Thus, at higher per capita levels of income, there is a tendency for industrial production extending into more capital intensive and technologically more complex fields.

As regards population, there is a relationship of direct proportionality between population and the level of production, since the demand for industrial products will rise with in population, given other conditions. At the same time the size of the market is not independent of per capita income and that a large world market could compensate the inadequate size of domestic population. On the supply side, there is a similar relationship of direct proportionality between population and labour force. An increase in population augments the industrial labour supply.

In addition to these two explanatory variables, one more variable, D, was introduced in the regression equations for the 13 manufacturing sectors. This is the "relative degree of industrialization" or the ratio of the country's actual value of the total manufacturing output to



the value derived from the regression equation (also known as "normal" equation) using per capita income and population. The U. N. study notes that the introduction of D as the third independent variable left unchanged the values of the regression coefficients on the other two variables and of the constant term in the equation: "it can thus be regarded as providing for a correction term that seems to distribute the overall residual of total manufacturing output over the thirteen composite sectors."<sup>10</sup>

The results of cross section analysis giving the regression coefficients for the total manufacturing and 13 sectors are reproduced from the U. N. study in table 1. The regression equations arrived at by the U. N. study are utilized for calculating the integration index. These equations reflect the average or normal pattern of industrial growth in the total manufacturing activity as well as in the 13 manufacturing sectors. Therefore, these equations have come to be known as "normal" equations.

As the equations are given in log linear form, it may be seen that the elasticity of output for total manufacturing with respect to per capita income is about 1.37. In other words, with constant population, the value added of total manufacturing industry increased slightly over one third more than proportionately with per capita income. The elasticity of output with respect to population which influences the market size and economies of scale is 1.12. That is, given the same per capita income, the total manufacturing value added increases approximately one eighth more than in proportion to the size of the population. As regards individual sectors only "leather products" varies less than proportionately with per capita income and "food, beverage and tobacco" approximately in the same proportion. The income elasticity of output for "textiles" and "non-metallic minerals" is smaller than for total manufacturing, which would mean their share in total manufacturing tends to decrease with the rise in per capita income. In "clothing and footwear" the income elasticity of output is almost the same as that for total manufacturing. For all other sectors the income output elasticities are higher than for total manufacturing, which would mean their share in total manufacturing would rise with rise in per capita income.

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<sup>10</sup> *Ibid.*, p. 5.

With regard to population-output elasticity, "food, beverage and tobacco," "leather products" and "clothing and footwear" have elasticities less than one; i.e., given the same level of per capita income, the per capita outputs in these sectors in larger countries tend to be slightly lower than in smaller countries. For "wood products," "printing and publishing" and "non-metallic minerals" the elasticities are slightly larger than one. The remaining sectors have higher population-output elasticities than total manufacturing. The highest elasticity is in "basic metals," where economies of scale are known to be important.

Regarding the elasticity of output with respect to the relative degree of industrialization, it may be seen that for a given deviation from the "normal" total manufacturing output there is approximately a proportional effect on "textiles," "wood products" and "other industries." The elasticity is more than one in the case of "basic metals," "metal products," "paper and paper products" leather products" and "non-metallic mineral products," while for the remaining five industrial sectors it is less than one. Assuming there are two countries, the first country being "normal" as regards overall industrialization ( $D=1$ ), and the second with high level of industrialization (1.4), the output in basic metals is almost twice as high in the latter country as in the former, and the outputs in "paper and products" and "metal products" over one and a half times as high.

An integration index can be defined as the ratio of the "normal" product of a given sector in the manufacturing industry of the region in the event of its integration to the sum of "normal" manufacturing product of that same sector in each individual country not integrated. Thus, the procedure involves calculating such indices for 13 manufacturing sectors. The next section describes the detailed procedure.

#### *The Model*

In a two country case, the "normal" equations for the manufacturing industry as a whole are the following :

$$V_{01} = A_0 Y_1^{a_0} P_1^{\beta_0} \text{ or } \log V_{01} = \log A_0 + a_0 \log Y_1 + \beta_0 \log P_1$$

$$V_{02} = A_0 Y_2^{a_0} P_2^{\beta_0} \text{ or } \log V_{02} = \log A_0 + a_0 \log Y_2 + \beta_0 \log P_2$$



where subscripts represent countries 1 and 2 and where

$V_0$  = value added for the total of the industry

$A_0$  = the constant term corresponding to the industry as a whole

$Y$  = per capita income

$\alpha_0$  = elasticity of output for total manufacturing with respect to income

$P$  = population

$\beta_0$  = elasticity of output for total manufacturing with respect to population

The degree of industrialization for a given country is defined by the ratio :

$$D = \frac{\text{Actual Value added to total manufacturing}}{\text{Normal Value added to total manufacturing}}$$

The "normal" equations for the 'i'th branch of manufacturing industry are :

$$V_{i1} = A_1 Y_1^{\alpha_1} P_1^{\beta_1} D_1^{\gamma_1} \text{ or } \log V_{i1} = \log A_1 + \alpha_1 \log Y_1 + \beta_1 \log P_1 + \gamma_1 \log D_1$$

$$V_{i2} = A_1 Y_2^{\alpha_1} P_2^{\beta_1} D_2^{\gamma_1} \text{ or } \log V_{i2} = \log A_1 + \alpha_1 \log Y_2 + \beta_1 \log P_2 + \gamma_1 \log D_2$$

where subscripts 1 and 2 denote country 1 and 2 and where

$V_i$  = value added in the ith branch of manufacturing industry

$Y$  = per capita income

$P$  = population

$D$  = degree of industrialization

$\alpha_i$  = income elasticity of output for the ith branch

$\beta_i$  = population elasticity of output for the ith branch

$\gamma_i$  = elasticity of output with respect to the relative degree of industrialization corresponding to the ith branch

If the above relationships exist we can determine integration being beneficial only on the condition that the regional product of at least one of the manufacturing branches is larger than the sum of the respective products of the two countries and that the regional product of the remaining sectors is not smaller than the sum of the two products.

The sum of the "normal" value added in the  $i$ th sector for both countries is given by:

$$V_{i1} + V_{i2} = A_i (Y_1 a_i P_1 \beta_{i1} \gamma_i + Y_2 a_i P_2 \beta_{i2} \gamma_i)$$

The normal value for the same  $i$ th sector for the integrated region is given by:

$$V_{ir} = A_i Y_r a_i P_r \beta_i D_r \gamma_i$$

where the subscript  $r$  represents the region and where  $a_i$ ,  $\beta_i$  and  $\gamma_i$  represent the elasticities of output with respect to per capita income, population and degree of industrialization as before,

$$Y_r = \frac{P_1 Y_1 + P_2 Y_2}{P_1 + P_2}$$

$$P_r = P_1 + P_2$$

sum of the actual value added in total manufacturing

and  $D_r = \frac{\text{for two countries}}{\text{"Normal" value for the region as a whole}}$

The integration index for the  $i$ th branch of the manufacturing industry is given by:

$$\begin{aligned} I &= \frac{V_{ir}}{(V_{i1} + V_{i2})} = \frac{A_i Y_r a_i P_r \beta_i D_r \gamma_i}{A_i (Y_1 a_i P_1 \beta_{i1} \gamma_i + Y_2 a_i P_2 \beta_{i2} \gamma_i)} \\ &= \frac{(P_1 Y_1 + P_2 Y_2) a_i (P_1 + P_2) \beta_i D_r \gamma_i}{(Y_1 a_i P_1 \beta_{i1} \gamma_i + Y_2 a_i P_2 \beta_{i2} \gamma_i) (P_1 + P_2) a_i} \end{aligned}$$

If  $I > 1$ , integration will be beneficial for the  $i$ th branch; if  $I < 1$ , it will not be so.

Up to this point we have been considering the integration index under static conditions; that is, the degree of industrialization of the region remains the same as at the time of integration. If we are to introduce dynamic considerations, the degree of industrialization would change.

The U. N. study observes that long run changes in  $D$  would depend on the existing possibilities of industrialization and the intensity of the efforts made by these countries to exploit these possibilities.<sup>11</sup> In the theoretical literature as well as case studies,

1. *Ibid.*, p. 27.

substantial stress has been laid on dynamic gains, which are likely to be realized through the reallocation of resources, beneficial influence of increased competitive atmosphere, larger investment opportunities under conditions of greater certainty and through innovative efforts. Under such circumstances,  $D$  should optimally be equal to one. The integration index calculated under dynamic conditions is bound to be greater than the index calculated under static circumstances.

### *Application of the Model*

The data necessary for application of the model are for 1969 in current prices. The reason for choosing 1969 is that it is the most recent representative year free from abnormalities and all subsequent years refer to period of reconstruction and rehabilitation in Bangladesh in particular. Table 2 presents them in dollar terms. Utilizing the coefficients for the total manufacturing output from Table 1 towards the purpose of arriving at "normal" values added, and the actual value added in total manufacturing, degrees of industrialization have been calculated which are given in Table 3.

Integration index under static consideration, i. e., when the degree of industrialization is less than one ( $D_I < 1$ ) is given in column 3, and the integration index under dynamic consideration is when  $D = 1$  is given in column 4 for each of the 13 branches of industry in Table 4.

It may be seen from Table 4 that integration is beneficial under static condition only in 6 of the 13 branches. They are in descending order, ranking "basic metals" (1.31), "chemicals and petroleum and coal products" (1.27), "other manufacturing" (1.21), "rubber products" (1.19), "textiles" (1.18), and "metal products" (1.12).

Once the dynamic considerations are taken into account which are reflected in  $D$  increasing to become equal to 1, integration becomes beneficial in all branches without any exception as could be seen from column 4 of Table 4.

### *Summary and Conclusions*

An *ex-ante* evaluation of the effects of economic integration in the Indian sub-continent utilizing the normal equations of Professor Chenery shows that integration is not beneficial in the short



run. This conclusion is based on the ground that integration indices calculated under the assumption of existing degree of industrialization being unchanged are less than unity for seven out of thirteen manufacturing sectors. Integration becomes beneficial only in the long run when dynamic forces come into play, such that the degree of industrialization grows to become optimally equal to one. The integration indices calculated under the assumption of the degree of industrialization being equal to unity are far greater than unity in regard to all the thirteen manufacturing sectors.

The above discussion brings out the importance of dynamic effects in integration arrangements. The fear of static effects being adverse and the likelihood of welfare losses in the short run should not discourage the policy makers in the sub-continent to plan long run measures of integration arrangements.<sup>12</sup>

TABLE I

RESULTS OF CROSS-SECTION ANALYSIS :  
1953 AND 1958 COMBINED SAMPLE

<i>Manufacturing Sector (ISIC Classification)</i>	<i>Regression Equations</i>
<i>Total Manufacturing (20-39)</i>	$\log V = -1.637 + 1.369 \log Y + 1.124 \log P$
Food, beverages, & tobacco (20-22)	$\log V = -1.032 + 0.978 \log Y + 0.862 \log P$ $+ 0.884 \log D$
Textiles (23)	$\log V = -2.549 + 1.205 \log Y + 1.329 \log P$ $+ 0.964 \log D$
Clothing & Footwear (24)	$\log V = -2.709 + 1.361 \log Y + 0.962 \log P$ $+ 0.877 \log D$
Wood Products (25-26)	$\log V = -3.288 + 1.531 \log Y + 1.030 \log P$ $+ 1.008 \log D$
Paper and Paper Products (27)	$\log V = -5.008 + 0.035 \log Y + 1.116 \log P$ $+ 1.699 \log D$

<sup>12</sup> The static effects of a Customs Union in the Indian Sub-continent have proved to be adverse except under one alternative common external tariff structure of the union, i. e., the lowest pre-union tariff rate prevailing among the member countries for each of the nine SITC Sections of commodities trade. Under all the other three alternative tariff structures, the union experiences welfare losses. For details see Jayaraman; T. K., *op. cit.*, Chapter 5.

Printing and Publishing (28)	$\log V = - 3.926 + 1.718 \log Y + 1.041 \log P + 0.873 \log D$
Leather Products (29)	$\log V = - 2.160 + 0.893 \log Y + 0.857 \log P + 1.251 \log D$
Rubber Products (30)	$\log V = - 4.176 + 1.582 \log Y + 1.201 \log P + 0.281 \log D$
Chemicals & Petroleum Coal Products (31-32)	$\log V = - 3.476 + 1.547 \log Y + 1.395 \log P + 0.712 \log D$
Non-metallic Mineral Products (33)	$\log V = - 2.258 + 1.157 \log Y + 1.014 \log P + 1.116 \log D$
Basic Metals (34)	$\log V = - 5.269 + 1.991 \log Y + 1.649 \log P + 1.915 \log D$
Metal Products (35-38)	$\log V = - 4.175 + 1.984 \log Y + 1.312 \log P + 1.566 \log D$
Other Manufacturing (39)	$\log V = - 4.872 + 1.847 \log Y + 1.333 \log P + 1.053 \log D$

Source: United Nations, *A Study on Industrial Growth*, New York: U. N. Publishing Service, 1963.

TABLE 2

## BASIC DATA

Countries	Population (in mil- lions)	Per Capita Income (in dollars)	Value Added in total Manufacturing (in million dollars)
India	523.980	87.51	6191.295
Pakistan	58.280	169.40	1322.501
Bangladesh	70.130	89.62	559.153
Sri Lanka	12.252	149.64	182.002
Nepal	10.845	78.02	79.111

Sources: United Nations: *Monthly Bulletin of Statistics*

Government of India: *Statistical Abstract of India 1972*.

Government of Sri Lanka: *Statistical Abstract of Ceylon, 1969*

Government of Pakistan: *Statistical Abstract of Pakistan 1970*

Government of Bangladesh: *Statistical Abstract of Bangladesh 1972*

*Far Eastern Economic Review Annual 1974*

Khan, Azizur Rahman, *The Economy of Bangladesh*, New York: St. Martin's Press, 1972

TABLE 3

## DEGREE OF INDUSTRIALIZATION IN 1969

Countries	Actual Value Added in Total Manufacturing (in million dollars)	"Normal" Value Added in Total Manufacturing Derived From Normal Equations (in mil- lion dollars)	Degree of Industrializa- tion $\frac{\text{Col 2}}{\text{Col 3}}$
India	6,191.295	66,400.000	0.09
Pakistan	1,322.501	16,830.000	0.08
Sri Lanka	182.002	2,032.000	0.09
Bangladesh	559.153	7,161.000	0.08
Nepal	79.110	724.400	0.11
Region	8,334.062	104,200.000	0.08

TABLE 4

Sr. No.	Manufacturing Branches	$I$ when $D < 1$ $I$ when $D = 1$	
1	Food, Beverages & Tobacco	0.79	7.41
2	Textiles	1.18	13.3
3	Clothing & Footwear	0.90	7.9
4	Wood Products	0.94	11.94
5	Paper and Paper Products	0.86	62.56
6	Printing and Publishing	0.97	8.74
7	Leather Products	0.77	18.23
8	Rubber Products	1.19	2.43
9	Chemicals & Petroleum Coal Products	1.27	7.83
10	Non-metallic Mineral Products	0.92	15.38
11	Basic Metals	1.31	16.39
12	Metal Products	1.12	58.57
13	Other Manufactures	1.21	17.25